Elderly People Growing Tails

The Constitution of a Nonempirical Idea

by Gregory Forth

Since the inception of the discipline, anthropologists have endeavored to explain why people the world over develop ideas that lack empirical support and how such ideas are accepted as true. This article deals with a claim found among the Nage people of eastern Indonesia, namely, that extremely elderly people grow tails. The idea is discussed in relation to local experiences of aging and the elderly and in relation to cosmological beliefs with which it appears consistent, and it is further analyzed in the context of Nage folk biology. By drawing on cognitivist theory, it is then demonstrated how the representation comprises a counterintuitive idea that readily combines with intuitive knowledge relating to observable processes of physical change in elderly humans. Also discussed are a notional taboo on looking at the putative tails that reinforces the belief, in part by adding to its counterintuitive appeal, and the idea's potential for enabling younger people to distance themselves ontologically from senility.

It is a virtual truism that social or cultural anthropology has always taken as one of its major tasks explaining apparently irrational or empirically unsupported ideas. Most attention has been given to cross-culturally widespread and general ideas, the image of or "belief in" spirits being one of the most obvious. In advancing particular theoretical positions, however, anthropologists have also focused on ethnographically very specific ideas, some of which have become quite famous—largely through regular citation in undergraduate textbooks. Adduced in support of a "primitive" or "prerational" mentality, one early example is the reputed statement of the South American Bororo, reported by von den Steinen (1894), that they, or rather the adult males among them, were red macaws. A somewhat later and equally famous instance is the coincidentally ornithological claim of the Nuer, that "twins are birds" (Evans-Pritchard 1956). Like many similar examples that could be cited, these propositions all have a decidedly cryptic feel and, largely for this reason, have frequently invited a metaphorical interpretation (e.g., Crocker 1977; Turner 1991).[1] They are, at any rate, not statements that could be taken as valid in any biological or zoological sense—that is, the proponents are evidently not claiming that certain human beings have wings or feathered tails (a trait that I select for reasons that will soon become clear)—and therefore are not statements that could be tested by matching against any empirical evidence.

While similarly puzzling, the idea that I discuss in this paper is, in several respects, quite different. Residing in the central region of the eastern Indonesian island of Flores, the Nage, a people among whom I have been conducting ethnographic fieldwork for over three decades, assert that human beings who survive to an advanced age will grow tails. Relating to the maturing human body, the claim, as Nage themselves recognize, is one that in principle could be tested empirically, and—unlike Nuer claims about twins and birds, for example—it is by all indications not one that is understood metaphorically by its proponents (who most certainly possess a concept of metaphor). Nor can the idea be explained simply as an ideological statement—not least because it possesses few if any social, religious, or cosmological functions (unlike the symbolic classification of Bororo husbands with macaws, according to some interpretations). At the same time, disproving the proposition is rendered difficult or even impossible by a series of apparently secondary ideas. Among these ideas, the most widely known is a taboo on viewing an elderly person's tail. Breaching this prohibition is said to result in the observer's premature death, so it is hardly surprising that no Nage I have ever spoken to claims to have seen such an appendage. Nevertheless, the idea that very old people grow tails is widespread among Nage. "Already has a tail" (*négha ne'e éko*) is a standard way of indicating that a person is extremely old, and the notion is not in any sense an article of specialist or esoteric knowledge. It is also an idea of some long standing. I encountered it within weeks of first arriving in Nage country in 1984, and I found it still in full vigor some 30 years later.

My objective is to explore possible ways in which this belief could be explained. I should emphasize that, by calling it a belief, I mean only that the idea is widely known and typically artic-

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1. Crocker argues that men among the matrilineal and uxorilocal Bororo men are represented as "parrots" because, like pet parrots, they are kept in houses belonging to their wives' groups.

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ulated in a matter-of-fact way. I make no attempt to determine how far Nage "really believe" that the very elderly grow tails (something which, in any case, presumably varies between individuals), although, as I show, they accept the idea less critically than they do other seemingly fantastic propositions (specifically, ones concerning animal-to-animal transformation). Rather, my objective is to show why the idea has captured the imagination of Nage and why they have continued to articulate and communicate it, evidently for some considerable time. After reviewing general details of the representation, including how far it may affect (or once have affected) relations between people of different age categories in Nage society, I approach the idea as, in effect, a possible expression of an "animist" cosmology (Descola 2013), that is, as a reflection of a hypothetical continuity between humans and nonhuman animals. Although there is nothing to suggest that the idea itself is manifestly spiritual or religious, this largely involves comparing it with explicitly cosmological representations that, in Nage eschatology and spiritual ontology, link humans with nonhuman animals, including sacrificial animals like water buffalo and pigs. Here I follow the anthropologically orthodox approach of endeavoring to explain apparently imaginary and irrational ideas as making logical sense, and therefore as rational, within an existing structure of equally nonempirical yet widely held beliefs. As I show, this approach proves inadequate—for several reasons that are specific to Nage ideology but, more importantly, because it conflicts with an ethnographically better-supported discontinuity that Nage assert between humans (*kita ata*, a term which encompasses all human beings known to Nage; Forth 2009) and animals (categorically distinguished as *ana wa*; Forth 2016)—and I then demonstrate how the belief in elderly humans growing tails can be properly understood only within the context of Nage folk taxonomy of living beings. As becomes clear, however, neither a resort to Nage zoological knowledge (which itself incorporates ideas not borne out by international biology) nor comparison with other similarly fantastic ideas comprised in Nage spiritual cosmology can sufficiently explain either why the particular idea about tail growth in old people is one Nage evidently find appealing or the apparent durability of this idea.

To this end, I analyze the proposition that elderly people grow tails as an idea that, for Nage as for anybody else, is counterintuitive. Here I draw on the cognitivist theory that, to be adopted, transmitted, and hence survive, cultural representations that contradict a universal intuitive ontology must be in some way articulated with ordinary experience and understanding of the world (Boyer 1994, 2001; Tremlin 2006), and moreover that, rather than drawing on other counterintuitive ideas, they must largely stand (or fall) alone. While cognitive approaches to cultural phenomena have largely been overlooked in mainstream cultural anthropology (Bloch 2012), this article aims to demonstrate the continuing relevance of cognitive analyses in explaining cultural ideas. However, my deployment of a cognitivist thesis is not uncritical, and in certain respects it departs from the usual cognitivist approach. Cognitive analysis has usually been applied to cross-culturally widespread categories and beliefs—such as a belief in spiritual beings or treating inanimate objects as if they were living beings (e.g., Boyer 1994, 1996). By contrast, this paper employs cognitivist theory heuristically to explore a very specific and, apparently, cross-culturally unusual idea in a single society, locating it in relation to somewhat similar ideas maintained by members of the same society. But more importantly, while Boyer claims that counterintuitive propositions, to survive as cultural representations, must readily combine with intuitions that allow people to interpret them in ways that they find relevant to their lives (e.g., by explaining misfortune or rationalizing required behavior), I argue that counterintuitive ideas that do not obviously serve such functions can equally catch on and endure owing to implicit links with constant factors of ordinary experience and are especially likely to do so when (as in the present ethnographic case) they combine with supplementary representations that inhibit empirical disproof.

Bearing on experience of the physical process of advanced aging, Nage ideas concerning a putative development in extreme senility also contribute to an anthropological study of advanced old age. This is still a relatively neglected topic in anthropology and one that, it has been argued, relativist and constructionist approaches dominant in contemporary social and cultural anthropology are methodologically ill-equipped to handle (Hazan 2009). Specifically, the approach proposed here offers a way of explaining cultural representations relating to the fundamental biological condition of advanced old age, understood as an "extra-cultural materiality" (Hazan 2009:60), by showing how a counterintuitive proposition builds on the ineluctable facts of bodily decline while going beyond these and thereby retaining its extraordinary character. Especially interesting in this connection is the Nage reluctance to fully recognize or accept what I demonstrate to be the primary implication of tail growth in their very elderly kinsfolk, namely, that they are beginning to transform into nonhuman animals. Because Nage recognize animals as being radically different from humans and therefore as manifesting otherness in an extreme degree, this implication is obviously negative. However, as an implicit component of the representation, the transformation may, by the same token, be understood as enabling younger people to dissociate from the disconcerting condition of advanced senility that the very elderly palpably embody.

Details of the Nage Representation

Nage speak of very elderly people growing tails mostly when describing individual biographies, such as when recounting genealogies, and in all of the cases that I recorded, people said to have grown a tail were deceased. The idea receives no mention in Nage myth, nor does it factor into any ritual practice, except for the previously mentioned taboo (insofar as taboo can be considered as negative ritual, or negative magic). Otherwise, tail growth as a mark of extreme age is articulated only in standard expressions referring to longevity, one of which I mentioned above and another that I discuss below. In connection with an

earlier focus on kinship and marriage, I first came across the proposition that the very elderly grow tails in 1984, when I began collecting genealogies and gathering information on indigenous age statuses, other aspects of social classification, and the life cycle. After recording details of the representation, I gave the matter little further attention, largely because my interests were drawn to other topics. However, I heard Nage again talking about old people growing tails nearly 30 years later, in 2013. The topic initially came up in a conversation about matters folk zoological with a man who explained how a local fish, called the "broom fish" (Forth 2016:212), was so named because its tail moves in a sideways sweeping motion; evidently it was this detail that reminded him of tailed elders, who are similarly claimed to use their tails as brooms (as I discuss below). Being impressed by the idea's apparent longevity, I made further enquiries and found that the proposition was still widely known and accepted, so I decided to explore it in greater detail.

As Nage make clear, humans who grow tails are not just old but extraordinarily old, attaining ages that a large majority of people do not. There is no time of life, expressed numerically or otherwise, by which a person is expected to have grown a tail. Nevertheless, Nage usually say people grow tails only when they have lived to a hundred years or longer, for example, between 120 and 130 years. Individual cases of reputedly tailed centenarians all involved people born before the colonial era (effectively beginning around 1915) whose chronological ages and dates of birth cannot be known; hence figures like "100 years" must be understood simply as estimates. In addition, these individuals were senior kin, mostly related to informants (who themselves were between 50 and 70 years of age) as *kajo*, "great-grandparent." But neither the kinship category nor the figure of 100 years (considered, for example, as a symbolic total) offers insight into the notion that extraordinarily old people grow tails.

During my investigation of individual cases between 2013 and 2015, Nage consistently claimed that there were no old people living at present who had grown a tail and that people no longer attained the extreme longevity required to do so. With remarkable regularity, the reason given for this change was that food in former times was "pure" and "natural," whereas nowadays many "chemicals" are used in food production—a claim that refers to both the recent availability of processed foods (such as packaged noodles and tinned goods) and the current use of chemicals in agriculture. Responding to my questions, Nage estimated the highest age to which people can live at present as from 70 to 90 years. The highest verifiable age that I recorded (in 2015) belonged to a 92-year-old man, while another elderly man was reputed to have already reached 100 years. But neither man was said to have grown a tail.

Extreme longevity is certainly admired by Nage, and insofar as reputed tail growth marks attainment of a prestigious age, it is, in that sense, a positive achievement. As indicated above, it is also associated with a past that is considered to be better, in some ways, than the present. But it cannot be inferred that the notion of old people previously growing tails simply reflects a critique of economic and environmental change. For one thing, I first recorded the idea in the early 1980s, before such changes were advanced in the Nage region and before people became aware of possible negative effects of dietary change and agricultural uses of chemicals. For another, it hardly explains why growth of a tail in particular should be the hallmark of exceptional age.

A few people suggested that elderly individuals themselves might sometimes state or otherwise indicate that they had grown tails, but others either disputed this or could not confirm it. Since I never had the opportunity to talk with an elderly person who was reputed to possess a tail, I am similarly unaware of what such people themselves might think about the notion or whether they are likely to confess or deny it. It seems never to have been either usual or polite to ask elderly people whether they had grown a tail. Also, because no one I questioned had ever seen such a thing, no one could say for certain what they looked like—although one man speculated that the appendage probably resembled the short tail of a water buffalo, a comparison that suggests that such tails are small.

A regularly rehearsed component of the Nage representation is the aforementioned assertion that tailed seniors would use these appendages, like small whisk brooms, to sweep hearthstones, and the further claim that, for this reason, the hearths of dwellings occupied by very elderly people were always extremely clean. Partly illuminating this idea is a general association of old people with the hearth (*lapu*)—which in Nage houses is always located in the enclosed and more private back section of the house. Several people described how very elderly individuals who were reputed to have grown tails would always remain, either sitting or sleeping, close to the hearth to keep warm (a practice consistent with the decreased ability of elderly bodies to retain heat). Reflecting this stereotype are phrases Nage use in parallelistic speech when referring to the attainment of a very long life: *meka jeka lége lapu, bupu jeka dhugu ugu*, "to become an elderly man who sleeps by the hearth, to grow as old as a woman who lies curled up like a dog." As Nage commentary revealed, both this depiction and the notion of old people dusting their hearths with animal-like tails are illuminated by the stooped posture and limited mobility typical of people who have reached an advanced age, conditions that require the very elderly to remain indoors and close to the fire. In fact, a more common expression Nage employ to denote extreme old age, and one sometimes complementing the aforementioned phrases associating very old people with the hearth, is the standard parallelism *bupu tiku, éko tebu*, "stooped old age, grown a tail (tail that has grown)"—an expression that will receive more attention below.

Further connected with the idea of tailed elders habitually using their tails as a whisk is the regularly mentioned claim that, when visiting the house of an extremely old person, one should first "call out from a distance"—thus announcing one's presence well before entering the house. In this way, the elderly householder, who may have been engaged in sweeping at the time, would have been able to "put his or her tail away," thereby precluding any possibility of younger people seeing the appendage. Linked with this precaution is another remarkable although far less common idea, that tailed elders were able to

retract their tails in such circumstances or that the tail would temporarily "disappear" if the elderly owner became aware that someone, deliberately or accidentally, was looking at it. In this circumstance, the observer might still die as a result, but if the old person was not aware of the observer's presence, all would be well. And complementing both ideas is yet another fantastic claim: that old people's tails would "come out," or emerge from the base of the spine and become visible, only when they were alone.

As the Nage hearth is a place of women—the gender mostly charged with cooking food, tending the fire, and cleaning the hearthstones—the representation of tailed elders characteristically remaining indoors has a pronounced feminine flavor. In the vicinity of the main Nage village of Bo'a Wae, of 10 cases of people who had reputedly grown tails before their decease, nine were women. What is more, *bupu*, a term referring to old age among humans in general, has a particularly feminine connotation, as shown by the expressions *bupu ga'e*, "elderly female," and *mata bupu*, "death of an elderly woman." On the other hand, as a reference to all old people, *ata bupu* refers equally to both sexes, just as *bupu tiku* ("stooped old age") denotes declining posture in both males and females, and I was assured that elderly men as well as women could grow tails. Hence the far greater proportion of elderly women among recorded cases of people growing tails apparently reflects no more than the fact that human females in general tend to live longer than males (Eskes and Haanen 2007), a difference recognized by Nage themselves.

Possible Functionalist and Symbolist Interpretations

Not only does the belief in tail growth among the extremely elderly have no discernible religious or ritual value for Nage, but there are also no social institutions or activities to which the idea has particular relevance. Having reputedly grown a tail is not a necessary or preferred qualification for fulfilling any political or ceremonial position, and an elderly person who grows a tail does not thereby gain any special powers, positive or negative, nor any distinction beyond having survived to an extraordinary age. In fact, people who have lived so long, typically having lost physical strength and mental acuity, hardly participate in social life at all and—not unlike very small children—are among a community's most marginal members. In this respect, therefore, they contrast sharply with "elders," people between the ages of 50 and 70, say, who—as is usual in small-scale societies—are among the community's most powerful and influential members.

Remarks by several Nage, including people who had childhood memories of encountering very old people who were reputed to have grown tails, suggested that the admonition never to enter a very elderly person's house before calling out may have prevented younger people, and especially young children, from disturbing very old people. One man recalled how, as a small boy, he and his age-mates were scared of one old woman whom their parents claimed had grown a tail, and so they generally avoided her. Any such function, however, is more likely to be a secondary development from the basic representation and, of course, fails to explain the specific idea of tail growth. Although there are other reasons why young children might be afraid of the extremely elderly, including readily visible aspects of their physical condition, it is possible that the notional risk of illicitly viewing a human tail, used as a warning to youngsters, has contributed to the maintenance of the representation. But in view of the potential value of the idea as a sort of bogey, this does not explain why old people nowadays, who may also not always welcome (or whose caregivers may not welcome) the company of potentially bothersome children, are no longer described as having tails, nor does it explain why the representation should apply only to people reckoned to be 100 years or older.

Nage also speak of old people as possessing, in addition to tails, "ancient horns" (*tadu waja*). These horns, however, are described as invisible, and in the general view the attribution is "only a way of speaking" (*bholo 'ana*)—which is to say, a recognized metaphor. This metaphor is apparently widespread in eastern Indonesia, occurring also on the neighboring island of Sumba. Thus, in parallel speech, Sumbanese describe longevity as attaining "the growth of the horns, the reddening (discoloration) of the tusks" (*tumbu kadu, rara uli*; Forth 1981:454). And to this, they sometimes conjoin the additional parallelism "white hair, stooped (old) age" (*uwa kaka, kaweda nàkapu*), the second component of which is synonymous with Nage *bupu tiku*, the complement of *éko tebu*, "grown a tail." What is more, Nage employ metaphors depicting humans more generally as possessing horns—a usage consonant with a pervasive analogy between human beings and water buffalo expressed in several contexts of religious thought (Forth 1998). As a metaphor, the representation of old people developing "ancient horns" is therefore quite different from the claim that the very elderly (and implicitly people who are significantly older than most elders) will grow tails, because the tails are described as real appendages visually accessible to anyone who breaches the prohibition on observing them.

Because growing a tail involves an unusual physical extension, the condition might alternatively be interpreted as a metaphorical reference to people attaining an excessive longevity. However, not only is this idea never articulated by Nage, but there is no suggestion that people who have grown tails have lived longer than they should. Indeed, far from being disapproved, the putative condition represents a positive achievement. As a widely held belief, therefore, the Nage statement that very old people "grow tails," or did so in the past, is more than a simple metaphor for reaching an extreme age. A usage of this sort is conceivably one way in which the belief could have originated, that is, by a figurative statement coming to be interpreted literally. But this hardly explains why Nage have come to accept tail growth in advanced old age as something that can actually happen or why the idea endures to the present.

Although the representation of elderly people growing tails does not of itself possess religious value, it might nevertheless be understood as a concomitant of several explicitly spiritual beliefs. More specifically, since Nage identify tails with nonhuman animals (a connection I explain in detail below), the

idea should be considered as a possible function of Nage beliefs linking humans in general with animals. In addition to supposedly growing tails, it is undeniable that very elderly people are ineluctably associated with another physical change, one that is both impending and unequivocally real. This, of course, is the transformation from life to death, something that simultaneously involves a nonempirical transformation of humans into spirits, entities that for Nage are as ontologically different as are humans and animals. And it may therefore appear relevant to the present problem that, in certain contexts, Nage describe souls of the deceased as assuming animal form—for example, Wolf snakes (*Lycodon* species) that enter houses and house-lizards (*Hemidactylus* species) that drop from a ceiling (Forth 2016:200, 210), both of which are considered to be manifestations of dead relatives that have come to visit.

Nage, however, do not equate deceased humans or human souls with animals in the way certain "animists" (e.g., some South American societies) are reported to do (e.g., Descola 2013)—an identification that typically involves humans, at some stage after they die, categorically transforming into specific animals, including valued game animals. On the contrary, Nage regard specimens of certain animal categories—and more particularly, small, nonmammalian creatures—simply as material forms that souls of the dead, and sometimes souls of the living as well (Forth 1998:50), will assume temporarily and situationally. In other words, Nage categorically associate no kind of animal with dead humans. Nor are the animal forms that souls occasionally assume the sort of animals, specifically domestic mammals, that Nage are likely to identify with the tails notionally grown by elderly humans.

A closer connection with putative tail growth in the elderly might be found in the Nage belief that cannibalistic witches (*polo*) can acquire the souls of the recently deceased and transform these into water buffalo or pigs, which they then slaughter and consume. This comparison is perhaps more germane, because the relatively short and bristled tails of buffalo and pigs (in contrast to the tails of snakes or other nonmammals) appear to be just the type of appendage Nage have in mind when they speak of elderly people's tails, including their reputed use as whisks. On the other hand, the idea that witches can kill people partly by turning them into animals applies equally to souls of people who die young, and furthermore to souls of the living, which witches can capture and slaughter to cause a person's death. Thus, far from pertaining exclusively to the very old or the recently deceased, these associations of animals with human souls apply to humans in general and so can hardly account for the specific idea of tail growth among the very elderly.

Another representation hypothetically relevant to the Nage belief in people growing tails attributes to human beings—and not specifically or explicitly their souls—a parallel existence in the world of spirits as spirit water buffalo, which malevolent spirits will periodically sacrifice, thus killing the spirit animal's human counterpart (Forth 1998:149–53). In this way, Nage conceive of living people as existing simultaneously as both humans and animals, a notion that may suggest the cultural ontology which Descola (2013) calls "analogism." But while this double existence accords with the aforementioned metaphorical attribution to old people of "ancient horns," it cannot account for the belief that the very elderly grow tails nor, moreover, for the fact that reputed cases most often involve elderly women. Above all, the typical victims of spirit buffalo sacrifice are neither elderly people nor women but young, wealthy, and socially prominent men. Such men figure as the principals in large-scale buffalo sacrificing, and while tail growth among the elderly is a relatively diffuse belief, the representation of humans as spirit buffalo is a special idea mainly relevant to Nage sacrificial practice, which Nage ritualists conceive as a means of destroying malevolent spirits reciprocally embodied as earthly buffalo (Forth 1998). Accordingly, Nage cosmology leaves open the question of whether the representation of people existing in buffalo form applies categorically to all human beings (as does the belief about tails) or only to individuals of a specific, largely socially defined kind that Nage consider the spirits most likely to select as victims.

Human Tails in the Context of Nage Folk Zoology

To appreciate the appeal of the idea of a human with a tail, more needs to be said about the specific significance of tails in Nage zoology and ontology, especially in regard to their conception of relations between humans and nonhumans. As noted, Nage associate tails with animals, but although this is hardly surprising, in the present context the association is underscored by two facts. First, unlike international zoologists, Nage consider humans (*kita ata*) and animals (*ana wa*) to be radically different sorts of beings (Forth 2016:54–61). Unlike "animists" (at least in the formulation of writers like Descola 2013), Nage attribute individual souls (*mae*) only to humans, and in other respects as well they represent humans and nonhumans as not just physically but essentially different. Thus, the scientific idea that humans are a "kind of animal" is considered not only nonsensical but—since animals are regarded as morally inferior to humans—somewhat distasteful as well. Second, when enumerating nonhuman animals, the Nage language requires use of the numeral classifier *éko*, "tail" (see for example *ja éko telu*, "three horses," over-translated as "three tails of horses"). By contrast, humans are always counted with *ga'e*, a qualifier that otherwise means "master, mistress." Affirming the association of tails with animals, Nage apply *éko* even to creatures that they describe as lacking tails (e.g., frogs, spiders, and short-tailed birds like stubtails and quails). In other words, "tails" are a feature that, regardless of the precise morphology of particular species, distinguishes animals categorically from humans. And this distinction is not compromised either by the Nage designation of the human coccyx as *toko éko*, "tail bone," or by their knowledge that, in rare cases, some people possess an elongated tail bone—any more than it is by their description of certain animals as "tailless."

In the context of Nage folk zoology, therefore, the belief implies that elderly humans who grow tails acquire a feature that is distinctive of animals, so that such persons themselves

become, or start to become, like nonhuman animals. By all indications, there is no gerontological condition—for example, some tendency among the very old to develop a morbid or abnormal growth in the region of the coccyx—which could induce people to conclude, on empirical grounds, that even a minority of extremely elderly people might "grow tails."[2] Nor by the same token is there any reason to suppose that the proposition has a basis in any actual experience of younger kin, who normally live with and care for the very elderly, including washing and dressing them. On the other hand, several particulars indicate that other physical developments in the elderly incline Nage to a depiction of humans as becoming specifically animal-like in advanced old age. One indication are stories recounting how very elderly people informants knew from childhood in the mid-twentieth century would eat very little and become extremely thin, and how their bodies would otherwise become visibly reduced in size. Most animals are, of course, smaller than humans. In addition, one man who recently passed away in his seventies following a wasting illness was described as having become no bigger than a dog, and as noted, a comparison with dogs appears in the standard phrase describing the elderly as sleeping curled up by the fireplace like a dog—a comparison Nage rationalize with reference to the bodies of very old people being so bent or bowed they are unable to stretch out.

At the same time, the animals to which very old people are most often compared are not dogs but monkeys. Nage thus remark how elderly people come to look like monkeys (specifically long-tailed macaques *Macaca fascicularis*, the only attested nonhuman primate species present on Flores), and they accordingly mention how infant macaques are noticeably more human in appearance than older specimens. In addition, Nage treat monkeys as the epitome of human ugliness (Forth 2016: 134). Elaborating on simian features characteristic of elderly humans, one man noted how older people develop "sunken eyes" (*ana mata hodo we'e*), a condition that exaggerates the protrusion of the orbital tori and especially the brow ridge. And although I have never heard these mentioned specifically, the comparison with monkeys is likely further inspired by the common thinning of elderly faces and limbs, thinning and reduction in growth of the head hair, growth of bodily and facial hair, graying of the hair (whereby black-haired Nage begin to approximate the typical color of macaque pelage), and wrinkling and blemishing of the skin.[3]

A connection between the belief in elderly people developing tails and Nage ideas about monkeys is additionally revealed in another, less direct way. Just as Nage say the very elderly grow tails that should not be seen owing to the taboo, so they also claim that monkeys, long-tailed animals that they normally describe as quadrupedal, will stand erect and walk on two legs but will do so only when people are not looking. Formally speaking, this second notion is an obvious inversion of the first. And despite the fact that elderly people's tails should not be observed (but in principle might be), whereas bipedal macaques can never be seen, the two ideas are epistemologically very similar.

Also rendering very elderly people more animal-like are changes affecting their ability to communicate and interact with other humans. Most notably, the extremely old lose the ability to hear and speak, and they frequently suffer intellectual deterioration as well. With reference to their increasing dependence on others, Nage in fact sometimes describe old age as a return to early childhood (*kami ana éno walo*, "we become little children again"), and it would also seem significant that *ana wa*, "animal," is a term Nage further apply, not entirely ironically, to young children (see also *ana*, "child," as a term applied to animals; Forth 2016:54–61). Yet in contrast to other changes (reduction in body size, growth of hair, skin deterioration, and decreases in language and mental skills), a more decisive physical development conducive to a view of extremely elderly humans becoming like animals is loss of a fully erect posture, a development registered in *bupu tiku* ("stooped old age"), the previously mentioned phrase always conjoined in parallelistic speech with *éko tebu* ("grown tail"). Several people in their 60s or 70s thus spontaneously remarked how very elderly people they remembered who had reputedly grown tails were no longer able to stand or walk erect, moving instead by pulling themselves along on their buttocks, holding on to their knees as they walked, or indeed crawling on hands and knees. With advanced age, therefore, humans can be described as losing fully bipedal locomotion and so tending toward quadrupedalism—an attribute, of course, not only of monkeys but of all nonhuman animals—and it is therefore significant that, of all the physical developments characteristic of very elderly people, Nage have selected this feature in particular as the conceptual complement of the supposed growth of a tail in designating the attainment of advanced age.

Provisionally, then, it may be concluded that there are several phenomenal bases for a conception of humans, when they reach extreme old age, as showing signs of imminent transformation into animals. This is not to argue that Nage believe humans, if they live long enough, will completely transform into monkeys, or animals of any kind, but only that the putative short tails of the very elderly can be taken to mark the beginning of such a process—especially when taken in combination with other more manifest physical developments, including changes affecting the hair and skin but most notably declining posture. Given the Nage

2. This was confirmed by Dr. Adrian Wagg, a gerontologist at the University of Alberta, who generously remarked on possible physical bases of the Nage belief during a discussion on October 13, 2015.

3. Nage frequently mention how, in the past, extremely elderly individuals would develop small holes in the skin, designated metaphorically as "weevil holes" (*lia suse*) and described as a readily observable phenomenon. By all indications, these "holes" were an actual dermatological deterioration in the very elderly caused by thinning and drying of the skin (A. Wagg, personal communication, October 2015). As with the tails, however, Nage insist that no one nowadays lives long enough to develop the holes, so I was never able to observe the condition. Because Nage regularly mention "weevil holes" in connection with the growth of a tail, the skin condition may often have been taken as a sign of the possible development of the unseen appendage.

representation of tails as a definitive and categorical attribute of nonhuman animals, all the interpretation requires is the reputed acquisition of a tail of any sort, or what might be called a generic animal tail, and this could be quite short.

If the belief about tail growth in elderly but still living humans involves the ineluctable implication of an incipient physical transformation into living beings of an essentially different kind (i.e., nonhuman animals), it should further be considered in relation to other Nage ideas about biological metamorphosis. As discussed elsewhere (Forth 2016:276–294), Nage entertain a series of what I have called "contemporary zoological transformations," ideas that, at some stage in their life cycles—and usually when they become very old—certain animals will undergo morphological change and turn into animals of another kind. Such contemporary transformations, it should be stressed, are not to be confused with metamorphoses related in Nage myth (e.g., where a person might turn into an animal or indeed into a rock or a star) nor with ideas like spirits (or shamans, in other societies) temporarily assuming animal form. Indeed, contemporary zoological transformations are considered permanent and irreversible. Among Nage, the most regularly mentioned transformations include the notion that old flying foxes (large fruit bats) will lose their wings and grow long bushy tails, thereby becoming palm civets (*Paradoxurus hermaphroditus*), and the claim that very old male deer, after their antlers wither and fall off, will enter the sea and turn into dolphins. Other representations of animal metamorphosis coincide with transformations considered valid by international scientists—for example, tadpoles (*ana fe*) turning into frogs (*pake*) and various larvae turning into several distinctly named insects. But, contrary to Atran and Medin (2008:21), contemporary zoological transformations always involve creatures that Nage conceive as essentially different—even when they concern transformation of categories that for modern zoology are immature forms of the same species. Expressed another way, both a tadpole turning into a frog and a bat turning into a civet involve, for Nage, a creature becoming another creature that not only differs in specific physical features (e.g., the presence or absence of a long bushy tail or the ability to fly) but also possesses a different essence and is thus a being of a fundamentally different kind. The growth of tails in elderly humans, as implicitly involving a transformation of humans into animals, therefore accords with Nage understandings of animal-to-animal metamorphoses as involving a comparable ontological change. So it may be supposed that transformation beliefs, like the belief that bats turn into civets (which in Nage taxonomy also entails a "bird" turning into a "mammal"), are fundamentally identical to the notion that elderly humans similarly grow a tail in the process of transforming into something like a monkey.

However, there are important differences. While Nage straightforwardly describe animals of one kind transforming (*bale*) into an animal of another kind, they do not expressly represent tail growth in humans as part of any metamorphosis, a radical change in a person's biological or ontological status, but simply as the development of an additional appendage, albeit one that is characteristic or definitive of a nonhuman animal. Furthermore, when asked directly, people could not or would not confirm the interpretation that growth of tails indicates a transformation of very elderly humans into any sort of nonhuman. The response is not surprising, because the interpretation involves humans changing into a less valued form of being, whereas tail growth among the elderly is apparently admired. To be clear, Nage do not consider growing a tail to be, in itself, meritorious; rather, what is admired is a person attaining the extraordinarily advanced age signaled by the tail. Even so, humans turning into animals is not quite the same as one kind of animal transforming into another. For although Nage also see animal-to-animal metamorphoses as involving categories of beings that are essentially different, the difference is, for them, of a decidedly lesser order than human-to-animal transformation.

In this respect, the fact that Nage do not expressly represent human tail growth as implying something fundamentally similar to metamorphosis between different kinds of nonhuman animals can be explained in a way that preserves the basic interpretation—namely, as a reluctance or refusal to recognize an unattractive and perhaps troubling yet ineluctable entailment of a widely accepted proposition. Rather than emphatically denying this interpretation, some informants stated, noncommittally, that they had never heard anyone say that tail growth among elderly people indicates a human-to-animal transformation, and one man even added that the interpretation "made sense." However, whether the interpretation is denied, simply declared unfamiliar, or even passively (although perhaps ambivalently) accepted, the fact that it is not one that Nage themselves articulate suggests an additional possibility. For while it may be discomforting to think of elder but still living kinsfolk as turning into animals, and thus into devalued others, the proposition that the very old grow animal-like tails suggests a means by which Nage can dissociate from the similarly discomforting aspects of an inevitable senility—by implicitly categorizing these as things pertaining to beings of an ontologically different kind.

Consistent with the foregoing is another difference between explicitly recognized animal-to-animal transformations and the metamorphosis implied by putative tail growth, namely, the fact that only the latter is associated with a taboo (*pie*). Or since Nage *pie* can also mean "inauspicious" (Forth 2007), one might alternatively say that, unlike the spectacle of an elderly person with a tail, there is nothing ominous or portentous about an animal changing into another kind of animal. In particular, this difference emphasizes the contrast between the two sorts of metamorphoses in regard to the challenge they pose to Nage ontology, where possible continuity (or breaches in discontinuity) between kinds of animals is of a different order from that between humans and animals. In addition, the taboo on viewing an elderly person's tail is of a piece with the Nage disinclination to recognize imminent transformation into something nonhuman as an undeniable implication of tail growth, since both remove the representation from critical scrutiny—the first vi-

sually, the second analytically—and hence preserve it as a proposition that cannot readily be tested empirically nor rationalized on the basis of an intuitive ontology that declares humans and animals to be essentially different kinds of beings.

Because looking on an elderly person's tail involves coming visually into contact with something that confuses two ontologically opposed categories, the Nage prohibition may partly be understood within the framework of Mary Douglas's (1966) famous theory of taboo as denying classificatory anomalies. However, this observation brings to light still other differences between notions of animal transformation and the development of tails among the extremely elderly. As discussed elsewhere (Forth 2016), only in the loosest sense can putative animal transformations be called "beliefs." Regularly expressing doubt about their veracity, Nage treat these putative transformations with considerable skepticism, and they do so despite—or perhaps because of—the fact that arguments for or against them are invariably based on morphological and behavioral resemblances between different species (e.g., the very similar heads and faces of civets and flying foxes, their similar pelage, similar size, similar diets, and so on), which proponents often rehearse in considerable detail. None of the animal-to-animal transformations, it should be noted, articulates with Nage symbolic cosmology or ritual practice (including, e.g., food or hunting taboos), and none fulfills any social or religious function. In these last respects, they may appear to differ only in degree from the representation of elderly people growing tails, a condition valued only insofar as possession of the appendage confers a certain distinction on the minority of people who survive to an unusually advanced age. Nevertheless, as statements that Nage frequently challenge on empirical grounds but also rationalize on the same grounds, animal-to-animal metamorphoses are more in the nature of hypotheses, even comparable in some ways to scientific hypotheses (Forth 2016:292–94), which Nage find interesting to think and talk about but which they are not really committed to in any way.

By contrast, the idea that elderly humans can grow tails is typically stated as a matter of fact and with apparent conviction. And this difference coincides with another disparity between the two representations, for while the belief about tails is widely known and regularly expressed, transformations of nonhuman animals are mentioned far less frequently. Accordingly, whereas I heard the proposition about old people's tales in 1984, during my first weeks on Flores, I did not come across the animal metamorphoses until the 1990s. This is not to say that there is no connection between the notion that extremely elderly people grow tails and, for example, the idea that flying foxes, when they become old, grow long tails, lose their wings, and transform into another morphologically and behaviorally similar (albeit flightless) mammal, the palm civet. However, differences in both credibility and popularity attaching to the two sorts of ideas show that Nage do not process them in quite the same way. In part, this difference may reflect the relative availability of the hypothetical animal transformations to human perception, the fact that all animals Nage speak of as (possibly) transforming into animals of other kinds, although in principle always subject to observation, are without exception wild species and so are far less often observed than are domestic animals, which accordingly are never the subjects of transformation beliefs. Elderly people, of course, can similarly be observed with relative ease, yet the claim that they eventually develop an anatomical feature definitive of another order of living beings (nonhuman animals) is, so to speak, protected by other factors. One is the taboo, insofar as this reduces the likelihood of people actively attempting to test the idea that such tails exist. Another is the indefinite character of the claim itself: the fact that the absence of a tail in an elderly person could simply be explained by the person not yet being old enough to have developed such an appendage. A third factor is the circumstance that—unlike both domestic and wild animals—elderly people are normally clothed and typically remain inside dwellings, where they can spend considerable periods of time alone. Yet another is the aforementioned claim by some Nage that tailed elders who think their tails might be observed are able to retract them. And, finally, there is the modern consensus that people no longer live long enough to grow tails.

Insights from Cognitivist Analysis

As the foregoing may suggest, a fuller explanation for the representation of elderly people growing tails must be sought in its cognitive qualities. It is quite clear that the idea is one Nage continue to find appealing and so are inclined to remember and talk about. Again, it is worth recalling that I first heard about the idea during my very first visit to the Nage region and that people were still talking about it over 30 years later.

An explanation of this continuity may be found in a cognitive approach to cultural ideas and especially the claim, associated with Pascal Boyer (1994, 2001), that counterintuitive statements—representations that contradict ordinary expectations of things grounded in a panhuman intuitive ontology—are "attention-demanding" (Boyer 1994:35) and inherently interesting. Atran (1990:219) had previously described some such ideas, or what he called "mythico-religious beliefs," as being "particularly attention-arresting and memorable." However, Boyer takes this a step further, arguing that to be advertised and regularly communicated and hence to survive, even the most arresting of statements must readily combine with ontologically intuitive knowledge, that is, common (or indeed, common-sense) knowledge that is constantly reinforced by ordinary thinking about and experience of the phenomenal world. Advancing an "epidemiological approach," Sperber makes much the same point when he speaks of "apparently irrational cultural beliefs" as "metarepresentations" (or representations of representations) and "downright provocations against commonsense rationality" that violate "head-on modular expectations" and thereby gain "a salience and relevance that contribute to their cultural robustness" (1996:72–73, 140). Such representations, or "relevant mysteries," Sperber adds, survive because of their "evocative" character, the most evocative and most successful representations being those that are "on the one hand, closely related to the subject's other mental representations and, on the other hand, can never be given a final interpretation" (1996:73).

Before proceeding, it is worth noting that, in recent writing by anthropologists advancing a new conception of animism, "ontology" has come to designate several culturally particular and relative and therefore variable ways of thinking about and even experiencing the world (see, e.g., Descola 2013; Kohn 2015; Viveiros de Castro 2014). By contrast, when Boyer, Atran, and other cognitivists refer to "ontology," or "intuitive ontology," they refer to a universal property of human cognition. Advancing a familiar form of cultural relativism, Stewart and Strathern, for example, assert that ideas incorporating counterintuitive components are "already established or 'naturalized' in existing cultural contexts" (2014:110). But this sort of claim misses the point of cognitive approaches, and in regard to the present ethnographic case, it is worth stressing that, rather than something entirely "natural" or "naturalized," Nage themselves speak of tail growth in elderly humans as something remarkable and for that reason worth mentioning. In contrast, it is hardly likely that they would mention (even to an apparently naive anthropologist) that elderly people become stooped or bent over, nor indeed that monkeys have tails.

As formulated by cognitivists, counterintuitive ideas are more specifically propositions that contradict one or more of three domains of intuitive (or "folk") ontology: the psychological (e.g., inanimate objects that can speak or hear), biological (e.g., animals that can turn into animals of different kinds), and physical (e.g., beings that can be in two different places at the same time). However, just as intuitive ontology concerns people's expectations of things grounded in an everyday experience whose representation is not always entirely correct (e.g., the sun moving across the earth), so counterintuitive propositions are not necessarily incorrect; and in fact, by the criteria of intuitive ontology, many scientific claims are counterintuitive (Forth 2016:292–294; Tremlin 2006:89–90; cf. Wolpert 1992). At the same time, representations of phenomena as merely atypical of their class are not counterintuitive. Counterintuitiveness is a quality of propositions that, considered in the framework of a panhuman intuitive ontology, would appear to be quite fantastic or impossible. So in this regard Tremlin's statement (2006:89–90) that bats, whales, and platypuses are "counterintuitive" because they are atypical mammals—by which he means that, with regard to their form of locomotion or method of reproduction, classifying these animals as "mammals" is counterintuitive—is, to say the least, questionable. However, the Nage claim that elderly humans grow tails does indeed contradict intuitive biology and, by contrast to the modern classification of whales and bats, is therefore quite straightforwardly counterintuitive.

To demonstrate how this is so, and moreover to show how any counterintuitive idea might become accepted and endure as part of a cultural tradition, it is useful to review Boyer's analysis of the culturally ubiquitous representation usually labeled "spirits" or "spiritual beings." Spirits are counterintuitive and therefore arresting and appealing, Boyer argues, because they are able both to remain invisible and to manifest in various visible forms (which they can typically alter at will), to pass through solid objects, to affect things over great distances, and so on—all the while existing in space and being deemed to occupy specific places. At the same time, spirits are persons and so, like humans, are credited with thoughts, feelings, motivations, and the like. Accordingly, they are partly interpreted in terms of an intuitive psychology (Boyer 1994:107–110; Tremlin 2006:88–89), thereby becoming the subject of a variety of inferences—for example, invisibly punishing people who anger them or rewarding those who please them. In this way, spirits become intelligible and potentially relevant to a variety of human concerns and so are readily retained in memory and become subjects of a regular cultural discourse.

From the foregoing, it is clear that, to be viable, counterintuitive ideas cannot be completely counterintuitive and that their intuitive aspects are essential to their acceptance, replicability, and durability. Boyer (1994:121–123) therefore proposes a necessary "balance" between intuitive and counterintuitive components, further arguing that certain combinations of the two constitute a "cognitive optimum." From the need for counterintuitive claims to integrate with intuitive thought, it also follows that, in their entirety, some counterintuitive representations are more counterintuitive than others, and Barrett (2000; cited in Tremlin 2006:90) has accordingly described some concepts as "minimally counterintuitive."

Spirits—invisible "persons" able to breach the laws of physics as recognized in intuitive ontology—are obviously more counterintuitive than elderly humans growing tails, even when this idea is combined with the similarly startling claim that anyone observing these tails will consequently die. Yet the Nage idea is still counterintuitive, and it is so in at least two respects. First, animals have tails, not humans; indeed, for Nage, tails are what define all animals and distinguish them categorically from humans. This distinction may appear to implicate peculiarities of Nage folk taxonomy in the image's counterintuitive appeal. Yet quite apart from the widespread and arguably universal character of the contrast of human and animal, speaking of "humans growing tails" would be counterintuitive for anyone familiar with human bodies. Second, living beings are either born with tails or they are not; they do not grow them after attaining maturity, and least of all toward the very end of their lives.[4] Of course, in this second respect, Nage statements about animal-to-animal transformation are also counterintuitive. Sperber (1996:73) thus describes such metamorphoses as "flatly contradicting universal assumptions about biological phenomena," while Atran (1990: 219) similarly characterizes them as "dramatically contradict[ing] common sense assumptions." But by virtue of the radical difference between humans and animals posited by Nage—and, cognitivists would argue, by intuitive biology as well—animal-to-animal transformations are less counterintuitive than putative phenomena which imply humans turning into animals.

As noted just above, Boyer emphasizes the sustaining role of inferences generated by intuitive elements of counterintuitive

4. This, of course, contrasts with the very small number of people born with an extended coccyx, a phenomenon Nage treat simply as a physical abnormality, not subject to any taboo, and thus quite different from elderly people who reputedly grow tails.

representations, such as the fact that spirits, while contravening intuitive physics (by walking through solid objects and so on), are conceived as persons and therefore as able to communicate and interact with humans in significant ways. The Nage representation of very old people growing tails differs from this insofar as the representation itself seems not to give rise to this sort of inference. In fact, its primary implication is that the tailed elderly are transforming into nonhuman animals, which augments rather than mitigates the counterintuitive quality of the idea. On the other hand, analysis of the Nage belief shows how counterintuitive claims can themselves be generated by, or develop as inferences from, empirical phenomena fully consistent with intuitive ontology—in this case, visible signs of advanced aging. What is more, owing to this connection, the empirical phenomena provide continuing support for the nonempirical claim in the same way that other kinds of inferences lend support to common representations of supraempirical or spiritual beings. In fact, counterintuitive claims derived ultimately from empirical observation would seem to be a major way in which such claims arise in science. Counterintuitive claims that are accepted in international science presumably endure largely because of their consistency with other, previously accepted scientific claims (Lewens 2015:26), including ones that do fit with ordinary intuition as well as other counterintuitive claims that do not. In contrast, the durability of counterintuitive propositions that are inaccurate, that is, that cannot be matched against any empirical evidence, would appear to owe more to their arresting qualities, which is to say, the way they flatly run counter to intuitive ontology. Yet, in this case too, I would argue, such representations can be sufficiently sustained by continuing links with, and inferences drawn from, objects of experience consistent with ordinary intuition relating to a given phenomenal category.

In the present example, the counterintuitive claim is, of course, humans growing animal-like tails, whereas the objects of ordinary experience are perceptible signs of physical aging, and the phenomenal category is elderly humans. The inference drawn from experience of physical aging is that this palpable process involves a gradual transformation into a nonhuman animal and, therefore, that aging humans will eventually develop, or begin to develop, a tail. In this case, moreover, the continuing connection between the inferred counterintuition (the fantastic idea that elderly people grow tails) and the source of the inference (manifest changes in elderly bodies) is potentially bolstered by the previously mentioned standard expression *bupu tiku, éko tebu* ("stooped old age, grown a tail"), where the first element ("stooped old age") refers to the evident fact that, after a certain age, human posture declines and the body starts to incline, literally as well as figuratively, toward an animallike quadrupedalism. It is also significant that, as a reference to loss of erect posture, *bupu tiku* does not refer solely to a single anatomical change. Because posture pertains to the whole body, the phrase implicitly concerns the entire person, thus functioning as a synecdoche for all physical transformations—many quite drastic yet equally real and observable—that accompany or constitute aging. To be sure, declining posture, like other, largely simultaneous physical deterioration generally associated with later stages in the aging process (e.g., those affecting head and body hair and the skin), can begin well before the extremely advanced age at which Nage say elderly people begin growing tails, and indeed the two sorts of phenomena—one empirical, the other nonempirical—are epistemologically and ontologically quite different. Even so, the first provides the second with what may be called a context of plausibility, which renders the counterintuitive idea acceptable and transmissible as an extraordinary claim about people who, on account of exceptional longevity, have gone beyond simple posture decline or other manifest symptoms of aging.

If the persistence of the counterintuitive notion of very old people growing tails is sufficiently explained by its combination with intuitive knowledge of physical changes in elderly bodies, a question yet remains concerning the taboo on observing these putative tails. As noted, the taboo seemingly protects the idea from empirical disproof by reducing the possibility of anyone looking for a tail, and so may be thought to contribute significantly to the idea's acceptability. Yet the taboo is as counterintuitive as the basic idea. Except for the fact that Nage speak of the tails as things that exist empirically (or things that did so formerly), this would be the only instance I know of where a Nage taboo applies to an action that could not actually be performed. In fact, no one I asked knew of any case where the prohibition had been breached. And also worth recalling is the supplementary idea that tailed elders, when they think they are being observed, are able to retract their tails, thus precluding any breach—a claim that recalls the proposition that monkeys are able to walk bipedally but will only do so when people are not looking.

In these respects, therefore, the taboo appears quite contrary to the usual concept of taboo. On the other hand, the taboo increases the counterintuitive character of the central idea inasmuch as it implies that elderly people's tails could, in fact, be observed, and rather than augmenting the acceptability of the representation, as do links with ordinary intuition of the aging process, the pseudoprohibition, as it might be called, extends the mystery of the putative phenomenon, affirming its extraordinary and remarkable character. In addition, all taboos can, in other respects, be called counterintuitive. They do not involve ordinary intuition because there is no obvious causal connection between looking at a part of someone's body, for example, and dying prematurely. Also, the notional consequences of engaging in the frequently very specific actions to which taboos apply are often diffuse, vaguely articulated, or even unknown. And where consequences (usually death, illness, or other affliction) are articulated, these need not follow automatically from transgression, while specific instances of misfortune which might result are not consistently or systematically linked with known or suspected breaches (cf. Sperber 1975:96–98).

If the taboo adds to the counterintuitive character of the primary proposition, which is already counterintuitive, it would follow that the notional prohibition on looking at an elderly person's tail, although adding to its arresting quality and hence

increasing its appeal, may not be essential to sustaining the representation of tail growth in the very elderly in the same way as are empirical accompaniments of advanced age in humans. That it may be dispensable is indicated by two factors. First, comparable animal-to-animal transformations survive in the absence of any taboo. Second, as I discovered during recent fieldwork in the ethnolinguistically cognate but distinct Lio region, some 150 km to the east of Nage, people there also claim that the very elderly grow tails—or at least that they used to, since Lio, like Nage, further state that nowadays no one lives long enough for the appendage to develop. But unlike Nage, Lio appear never to have recognized a taboo on observing the tails. It may be consistent with this apparent absence that Lio seemed more skeptical than Nage about the tails, thus treating the idea somewhat more like animal-to-animal transformation—a notion that Lio also recognize. On the other hand, they also seemed less familiar with the idea, thus suggesting that it may have proven less durable among Lio, a possibility that could further suggest that among Nage the taboo has contributed marginally to the idea's overall appeal.

Conclusion

I have shown how a detailed ethnographic study of a specific idea in a particular society—the Nage proposition that extremely old people grow tails—invites several lines of analysis and interpretation, thus facilitating an evaluation of these as different ways of explaining the idea. Various usages attest to an axiomatic Nage identification of tails with animality, thereby demonstrating how the idea carries the inescapable implication that physical senility entails incipient transformation into a nonhuman animal. Viewed in the context of Nage spiritual cosmology, the belief about tails may suggest a possible link with ideas connecting human souls with nonhuman animals and living humans with spirit buffalo. Also, these partially similar beliefs seemingly situate the idea in the context of a recently reformulated "animism" that posits an ontological continuity between animals and humans. However, the fundamental opposition Nage recognize between humans and animals, beings they distinguish in regard to both physical form and essence, points to a fundamental discontinuity; and especially in view of the quasi-empirical character of the representation, which entails an actual physical transformation comparable to empirical changes in very elderly bodies, a more promising comparative context is the series of ideas involving transformation of one kind of nonhuman animal into another. Assuming historical priority, these folk zoological metamorphoses—alone or together with certain spiritual or cosmological ideas—could have provided the original inspiration for the notion that elderly people grow tails. Yet in their content as well as the extent to which they are voiced and found credible, these ideas reveal substantial differences from the belief in tailed centenarians and so cannot explain why this specific idea is uncritically received, has taken hold of the imagination of a whole community, and has persisted as an enduring cultural representation—and has done so, moreover, even in the absence of definite social or religious functions.

Viewing the belief as predominantly counterintuitive (or contrary to ordinary expectations of the world), I have argued how a fuller explanation can be achieved only by adopting a cognitive approach that both highlights the appeal of counterintuitive ideas and identifies intuitive factors that ensure their continued communication and acceptance within a community. As demonstrated, a crucial factor in ensuring the survival of the idea as a regular item of Nage discourse is the empirical support of palpable physical facts of advanced aging, and especially phenomena (such as postural decline indicating an incipient animallike quadrapedalism) that suggest metamorphosis of the extremely elderly into nonhuman—and therefore, for Nage, necessarily "tailed"—animals. All this sufficiently accounts for the appeal and acceptance of the central idea of the very old growing tails. But because of the way it invokes the human-animal contrast, the proposition, even in spite of its negative ontological implication, may offer an additional appeal. For it can be understood as enabling Nage to disconnect themselves psychologically from disturbing features of physical senility by, in effect, treating the condition as something alien to humanity and belonging to an essentially other animality.

Comments

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Dr. Forth's paper should be regarded as a most interesting footnote to his magisterial work, *Why The Porcupine is not a Bird* (2016), one of the most comprehensive accounts of a folk taxonomy ever published. In other writings, Forth has explored preferential matrilateral cross-cousin marriage, ritual, folklore, and symbolic classification among the Nage.

His surmise as to why his Nage informants said that very old people literally (and not metaphorically) had tails is plausible, and the argument is well presented. I am not convinced that such alleged occurrences are a significant manifestation of something that stands out for the Nage because they are "counterintuitive." Furthermore, one is left with a nagging suspicion that there never were any specific Nage identified by contemporaries as having such appendages.

Concerning this last point, Forth's informants insisted that people with such tails were at least 100 years old. Due to modernization and the introduction of chemicals, no such people may be alive today, although one tailless Nage villager is 92 years old. However, 10 tailed centenarians supposedly lived near a central village in days of yore, although nothing else is said about them. We are told that the tails were little whisks,

rather like brooms that sweep away dust. Those who had them were at pains to conceal them from prying eyes. There was a taboo on seeing them, and the penalty was death. Given that there is no real reason to suspect a decrease in longevity, it is statistically rather unlikely that as many as 10 centenarians, with or without tails, existed recently in so small a population (Nage number 68,000 today). Of course, we may allow for a little exaggeration. Forth may indeed have received some unequivocal statements about some people who may never have existed, an interesting but not uncommon problem in anthropology. Such statements are comparable in some ways to those other ethnographers have received about witches and their familiars (e.g., see Evans-Pritchard [1937:51–56] on female witches who become pregnant with cats and give birth to them secretly).

Forth cogently insists on the empiricism of Nage folk biology. Observation necessarily precedes classification, although the verification methods and experimentalism of scientific biology are absent. Most folk-generic taxa have their equivalents in the Linnaean system. Peculiarities such as the use of nonmammalian terms for the sexes of porcupines are explained by visible features, such as the presence of quills rather than fur and the absence of a full tail. For all that, Nage see porcupines as mammals. Unlike some much-discussed Amazonian peoples, Nage firmly distinguish humans who have souls from animals who do not. Most animals have tails, and normal humans do not have them. Indeed, if one counts the animals of any species, even tailless ones, one should insert the word *éko* or tail after the cardinal number. Forth accordingly tells us that the purported tailed elders could be regarded as undergoing the process of metamorphosing from humans to animals, a change that was reflected in their stooped posture, physical debilities, difficulties in communication, and tendency to curl up like animals by the hearth. There is a parallel in other Nage ideas regarding physical metamorphoses, such as tadpoles into frogs and flying foxes into palm civets, albeit there are no taboos pertaining to these changes.

While some of Forth's informants accepted his interpretation of their "belief," Nage do not have any belief that all humans will turn into any specific species of animals after death, or vice versa. Forth is at pains to show that Nage maintain a distinction between animals, spirits (who are not regarded as living beings), and people. They have what Descola would call a naturalistic (rather than an animist) ontology and, as empiricists, rely on visual observation (in preference to other senses). Forth is very sceptical of the ultrarelativism of advocates of the ontological turn.

Is there any evidence for a residue of animism among the Nage? Wild spirits can temporarily take on the form of reptiles. Water buffaloes and pigs have short tails, and they might be equated with very old, tailed Nage. Witches can supposedly turn people into these animals. In the spirit world, we are told, the spirits sacrifice spirit buffalo, who correspond to people in this world, with the effect that the demise of spirit buffalo coincides with the death of people. However, witches and spirits evince no preference for older people as opposed to young, healthy people. Reciprocally, when people sacrifice water buffalo, bad spirits die. This process that Forth calls reciprocal inversion does seem to resemble Viveiros de Castro's perspectivist Amazonia, at least superficially. If there is a problem here with the interpretations of Forth and the late structuralists he opposes, I suspect that it lies in ideal-typical thinking. If Nage have a basically naturalistic ontology, why should there not be traces of animism? Do Viveiros de Castro's Arawete really believe, without exception, that both humans and animals have the same souls and live in parallel social universes and that there is no divide between human culture and nature? Furthermore, Terence Turner remarked (2009) that some Amazonian groups with larger villages, like the Bororo, clearly separated culture and nature.

Just like ghosts who can walk through walls and witches who can fly, centenarians with tails constitute a "counter-intuitive" event. The notion that the appearance of counter-intuitive intentional agents is supposedly a key feature in the development of religious thought is shared by Sperber, Boyer, and others who are sympathetic to evolutionary psychology. Usually, such an agent combines features that are exceptional with others that are normal and quotidian, a fact that makes its manifestation all the more effective. Very often, such agency is linked to the occurrence of misfortune or major events that might confound explanation (see Boyer 2001:326–328). Forth admits that Nage do not (despite the taboo) appear to attach religious importance to tailed elders, and their manifestation does not seem to be linked to any event of natural sense, something that can happen with respect to both folk taxonomies and symbolic classification (which cannot always be rigidly separated). En passant, he mentions Douglas's work on classificatory anomalies (1966) and admits it "partially" fits the case. In fact, the old model works rather well. Some things that transgress boundaries may be merely noted, others may pique interest, and others may cause laughter or revulsion. Some are partly or wholly products of the imagination, and others are part of some group's everyday world. Think of rock badgers and pigs in Leviticus (as represented in Douglas's *Purity and Danger)*, cassowaries, centaurs, and Nage centenarians with tails.

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Irrational Beliefs: Virtues and Limitations of the Cognitive Approach to the Study of Culture

Anthropologists' concern with the explanation of human irrationality has been pervasive since the very beginnings of the discipline. Traditionally, the answers provided by modern anthropologists, setting aside their nineteenth-century social evolutionist forebears, have been either some form of cultural relativism (rationality is a cultural construct, and what looks irrational to some people might look perfectly rational to others) or some form of symbolic or functionalist interpre-

tation (irrational beliefs look irrational because they stand for something else, hence apparent irrationality should be explained by a latent rationality of sorts, or irrational beliefs are useful in so far as they meet some psychological or sociological need). The two approaches are not necessarily incompatible, although they might develop into different forms of analysis and explanation.

The interesting thing about this outstanding paper is that it challenges both. On the one hand, the belief in elderly people's tails looks as irrational to us as it does to the believers themselves; and on the other hand, it does not have any metaphoric value or ritual significance, like the famous "twins are birds" of the Nuer, nor does it seem to fulfill any psychological or social function, like the social integration achieved by totemic religion according to Durkheim's seminal thesis. Furthermore, unlike the belief in a rotating sun, which could be seen as an instance of an erroneous ethnoastronomy, the belief in elderly people's tails cannot be simply taken as an instance of an erroneous ethnoanatomy. While the belief that the sun circles the earth is a perfectly intuitive belief that does not need any special cultural training to back it up—much to the contrary, it is the opposite view that needs a great deal of cultural indoctrination in the form of scientific research—the belief in elderly people's tails is counterintuitive through and through. What could make people accept such a counterintuitive proposition, which, moreover, seems to be deprived of any latent symbolic meaning or function? Forth's theoretical option is the cognitivist approach to the study of culture as developed, among others, by Sperber and Boyer. Irrational or counterintuitive beliefs are to be explained by their cognitive attractiveness. It is the right combination of intuitive and counterintuitive components that makes them attention-grabbing. Very little cultural indoctrination is needed to remember such beliefs, for despite their counterintuitive content, the fact that it appears to be suitably combined with intuitive elements turns an otherwise banal and easily forgettable statement (too intuitive) or illogical and hence cognitively unprocessable (too counterintuitive) into a memorable proposition.

For those of us who were never seduced by the siren songs of cultural relativism, the cognitive approach to the study of culture came as a refreshing theoretical revolution in anthropology and the social sciences. But cognitivist perspectives also have their limitations, specifically in the way in which they have been developed so far. Prominent among them is, to my mind, the unjustified transition from the memorable to the believable. It is by no means obvious that what can be easily remembered shall be automatically believed. This is the so-called Mickey Mouse problem. Mickey Mouse is certainly one of the most memorable characters in the history of Western popular culture. Cognitivist scholars may rightly underscore the perfect combination of his intuitive and counterintuitive characteristics (half animal, half child, and so on). And yet nobody believes in his existence, not even little children. From a strictly cognitivist perspective, it is unclear how this transition from the memorable to the believable should be or may be accomplished.

By means of an impeccable and very prolific ethnographic description, Forth goes a long way in the right direction, certainly much further than current cognitive approaches have gone, toward the definition of what he calls "context of plausibility" for the belief in elderly people's tails. It is worth emphasizing that it is precisely his detailed ethnography that accounts for his remarkable success in overcoming more conventional cognitivist cultural analyses. There is a certain ambiguity, however, in the way in which he undertakes this transition from the memorable to the believable, which he might wish to clarify in his response to my comment. On the one hand, he seems to subscribe to the so-called byproduct theory of counterintuitive representations, according to which it would be the happy coincidence of the operation of certain cognitive predispositions, which in this case could be equated to certain forms of intuitive or empirical knowledge, such as the perception of manifest change in elderly bodies, plus contingent cultural ideas or prescriptions, such as the alleged physical similarity of very old people with nonhuman animals or the taboo on viewing an elderly person's tail, that explains the success of the belief that humans who survive to an advanced age will grow tails. In other words, there is no social, psychological, or biological function that such belief would fulfill and that would account for its existence in terms of final causes; consequently, the explanation is couched exclusively by way of proximate or efficient causes.

On the other hand, a certain functionalist inclination can be detected in his suggestion that the belief under scrutiny "can be understood as enabling Nage to disconnect themselves psychologically from disturbing features of physical senility by, in effect, treating the condition as something alien to humanity and belonging to an essentially other animality." So there seems to be a function for the belief in elderly people's tails after all. This explanation raises the question as to why the Nage would try to disconnect themselves from senility when, in other contexts, Forth points out, extreme longevity is admired and seen as a "positive achievement." But setting aside this possible instance of cognitive dissonance—conscious admiration paired with unconscious fear—there is the broader theoretical issue of whether we should account for counterintuitive cultural representations as a spin-off of necessary cognitive predispositions plus contingent cultural facts or as a requisite for the satisfaction of basic social, psychological, or biological needs.

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Around the world, folklore descriptions of half-animal, half-human creatures abound. Since Greco-Roman times, half-goat fauns and half-horse centaurs have captured European

imaginations. Yet the Nage lives described by Gregory Forth in this article are of an altogether different nature—nobody claims that they are anything but 100% human. The idea is that humans grow tails if they reach extremely old ages (over 100 years), but it is taboo for other people to look at these tails. This phenomenon is described in the Nage proverb *bupu tiku, éko tebu* ("stooped old age, grown a tail"). This occurs within a folk biology in which the Nage otherwise assert a strict discontinuity between humans (*kita ata*) and animals (*ana wa*).

Forth's interpretation of human tails among the Nage allows him to address both anthropology's ontological turn and the apparently incompatible theoretical literature of cognitive anthropology. Forth characterizes ontological approaches, citing Descola (2013 [2005]) and Kohn (2015), among others, as "culturally particular and relative." He contrasts these to Boyer (1994, 2001), Atran (1990), and others who look for universal properties of human cognition. Forth thus accepts Maurice Bloch's "cognitive challenge" (2012) to render visible the theories of mind implicit in all anthropological theory. This innovative rapprochement between ontological and cognitive anthropology is an important theoretical contribution.

The ontological turn is not necessarily incompatible with cognitive anthropology. Philippe Descola, for example, constructs his theory partly in reference to connectionist models in psychology and Roy D'Andrade's (1995) concept of schemas (Descola 2013:101). For Descola, ontology is not another word for culture. Instead, ontologies are locations on a four-quadrant grid that maps out possible ways for humans to imagine themselves in the world according to their perceptions of similarities or differences between humans and nonhuman animals. Since they see themselves as similar or different in terms of either bodies or intentional minds, there are exactly four possibilities. Although "we may suppose that they [all four possible ontologies] coexist potentially in all human beings" (Descola 2013:233), one ontology inevitably dominates in any given society. This is how the Achuar become animists (similar interiorities and dissimilar physicalities), whereas modern Europeans are naturalists (dissimilar interiorities and similar physicalities).

Kohn's approach is radically different. If animism implies recognition that other creatures think and communicate, this way of perceiving the world is "grounded in an ontological fact: there exist other kinds of thinking selves beyond the human" (Kohn 2015: 94). Kohn stresses that human ways of living in the world emerge from the form of that physical world rather than from the imposition of human cognitive schema on existent systems (Kohn 2015:157).

Neither Descola nor Kohn are cultural relativists. Both of them propose strong theories about human cognition. Kohn argues that human cognition emerged from evolutionary processes, because communication systems existed even before humans arrived on the scene and occur even when humans are absent. This means that nonhuman animals have comparable cognitive capacities. Descola, on the other hand, believes that humans engage and perceive the world only through cognitive schema that ultimately rely on language, as in stories of animist humans turning into jaguars. These are apparently capacities held by humans alone. The real problem for Forth is that these new theories cannot explain why the Nage say humans can grow tails.

The theories mobilized by Atran and Boyer are more relevant. Rather than discussing ontology, they look at how humans perceive the world through ontological categories. These are abstract concepts like "animal" or "tool" rather than concrete ones such as "cat" or "hammer." Each ontological category comes with certain assumptions. All people universally expect that an animal moves on its own and reproduces like kinds, whereas a tool moves only when manipulated and is produced by human work. Ideas, especially religious ideas, gain traction by being repeated and remembered because they mix expectations of members of different ontological categories. Stories of tailed humans mix categorical assumptions because they attribute an animal characteristic to a human person. This is different from animism, which attributes human characteristics of intentionality to animals.

In Japanese folklore and popular culture, there are also *Tsukumogami*, household tools that receive souls, become animate, and may seek revenge if abandoned by their owners. This happens only when they reach an advanced age of over 99 years (Reider 2009). This notion attributes human characteristics of aging and intentionality to the ontological category of tool. Animals and humans can also become tsukumogami if they transform into dangerous demons with extreme age (Reider 2009:248). In contemporary Japan, tsukumogami emerge in *anime* but also in rituals held for very old tools, such as scissors, knives, or eyeglasses, after the deaths of their owners. Neither Descola nor Kohn is willing to even entertain notions that nonliving things can have souls. Interestingly, nobody pays much attention to how humans play with the expectations of ontological categories. Surely this ability, which makes humor possible, was important to human cognitive evolution.

Part of the difficulty of understanding this jumble of ontological categories rests with the notion of belief. In both Chinese and Japanese traditions, it is far more important for nonspecialists to perform rituals properly than to speculate on or believe in theological notions that come with them. Even in the West, the expectation that faith means belief in the literal existence of counter-intuitive beings is largely a product of the Protestant Reformation. This drive to more firmly understand what exists ontologically has surely nourished Western science. But not everyone is a sober Puritan. Medieval authors and contemporary anime artists in Japan take delight in playing with ideas of tsukumogami, apparently without needing to prove their actual existence anywhere. Maybe the Nage do the same with the idea of human tails. Both are entertaining tales about what happens to both people and their belongings when humans inevitably grow old and die. When dealing with human anxiety about aging, they concoct stories that people find memorable, even if nobody has ever seen a human tail in real life.

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Tales of Tails: Nonempirical Ideas or Semipropositional Representations?

Gregory Forth, a preeminent scholar of folk classifications, turns his hand adroitly in this paper to a number of interrelated problems. One has to do with whether ideas may be analyzed as "irrational." Another is whether ideas are to be seen as "nonempirical." The test case is an idea found among the Nage people of Flores in eastern Indonesia, that some people who are very old grow tails. Interestingly, no detailed descriptions are given of these tails, and it appears doubtful whether anyone has actually claimed to have seen them, because of a taboo on observing them that carries a sanction of the observer's own premature death. This is a taboo, then, that signalizes danger regarding a supposed anomaly in the humanity of some very senior people. Quite reasonably, Forth suggests that the whole idea represents a notion that very old people are growing less "human" in certain respects. Indeed, it is significant that the idea attaches itself (as a "tale") only to a few persons of very advanced age.

Forth seeks to proceed with an explanation of this idea. He highlights cognitive theory as well as the particular theory that certain ideas are ontologically counterintuitive. He works his way through to a consideration of biological conditions in extreme old age, noting also, significantly, that all the cases he recorded were of people who were deceased. We want to carry his discussion further here.

First, we argue that the issue of intuition versus counterintuition may not be central to the problem. Rather, the Nage idea in question can be seen as an example of Dan Sperber's concept of a "semi-propositional representation" (Sperber 1982), something that occupies an avowedly interstitial semantic space between the empirical and the nonempirical domain—if, indeed, people make any sharp distinction between these realms.

Second, following Forth's own reference to biological processes, we want to suggest that very old Nage people are likely to be thin and that, in such cases, their lower spines might well become more prominent. Old women might show this condition most prominently if they lost weight in body areas where previously there was some surplus fat. Forth himself adds here the point that the idea that very old people had tails was applied in nine cases out of 10 to females and that females in general tend to live longer than males. Moreover, no living person was said to have a tail, so the idea was effectively proofed against any kind of empirical refutation. It is not, therefore, that the idea is ever placed at risk of being disproved, and so it becomes like other local ideas in many cultures, a notion that can continue regardless of its supposed counterintuitive characteristics.

Here we want to revisit the concept of intuition. What is intuition? Forth declares adherence to the cognitivist view that there is a universal, species-based form of cognition and, further, that the contents of this form can be specified and delimited. What is the evidence for this species-based mode of cognition? It may not serve us well here to appeal to a concept in the English language such as "intuition," because it may latently contain locally ethnocentric values based on "common sense" or "self-evident truths." Actually, in the short piece of text quoted by Forth from our book on *Ritual* (Stewart and Strathern 2014:110), we do not contest the whole concept of intuition but merely remark on a problem arising out of Pascal Boyer's attempts to explain human ideas of ghosts. In saying that these are "counterintuitive," Boyer and other cognitivists appeal to putatively universal meaning and experiences, for example, that dead people remain dead and cannot move or become ghosts. Language is an intermediate variable here. In the Melpa language of Mount Hagen in Papua New Guinea, a verb translated as "recently died" (*koklom*) can mean that the person is unconscious and that their *min* or life-spirit has gone out from their body; but this leaves the possibility that it might return, as well as asserting that there is such a thing as a *min* in the first place. An observation of this kind calls to be taken seriously and thought about. Is the idea of a soul or spirit based on intuition or is it counterintuitive? In effect, the intermediate notion of "minimally counterintuitive" may help to point a way to resolve this disagreement.

Forth points out that the Nage do not think of Nage tail growth in elderly humans as "naturalized" but as exceptional or "remarkable." Yet we may comment here that these Nage ideas are certainly "culturalized," by being surrounded by secondary statements that preclude their disproof, so placing them in a privileged and protected arena of statements. When, in our book on *Ritual* (2014), we wrote of counterintuitive ideas being naturalized, we might as well have written "culturalized" in this sense.

At issue, then, is the whole question of what the terms intuitive and counterintuitive mean. We have discussed this in another reconsideration of cognitive approaches to the explanation of religion (Stewart and Strathern 2017:61–67). Here, we comment in the same modality about what is intuitive or counterintuitive and whether we can make universal propositions in relation to this problem. Forth refers early on to the idea of "a universal intuitive ontology," contrasting this with "cultural representations" that contradict it. Such representations are held by cognitivists to be "attention demanding" because they contradict "panhuman intuitive ontology." Forth further contrasts this idea of a panhuman ontology with an idea of ontology as something particular and culturally variable. Later, we read that there is something called "folk" ontology, which we learn states that ideas of "inanimate objects that can speak or hear" must be considered counterintuitive. Here is the problem. The classification of objects as "inanimate" implies a universal intuition. But what if people do not make such a classification at all? Among the Duna of Papua New Guinea, volcanic stones that appear out of the ground are said to be the petrified hearts of ancestors, and these were traditionally made the objects of worship because they

contained the power of the ancestors. Were they animate or inanimate? (The same with all animist ideas.) Questions of this kind problematize the distinctions cognitivists wish to make. It is true that the Duna do not think that all stones are animate, only certain ones found in certain places, but what has this really to do with intuition versus counterintuition? When we talked briefly about this matter in our *Ritual* book (2014), we did not, in fact, advance "a familiar form of cultural relativism"; we merely raised a problem about what can methodologically be identified as counterintuitive, when many ideas are enclosed in cultural forms that transform them into "intuitive notions." This problem still remains.

Forth himself works to disambiguate this arena for the topic of Nage old people having tails by arguing that, for the Nage, the idea is as counterintuitive as it might be for anyone. Perhaps—although humans have evolved from predecessors with tails, and the tailbone, aptly enough named, is a reminder of this. So, rather than being counterintuitive at all, the Nage idea may be seen as an extension of intuitions about the human body, most understandably in the case of very old people. We say this in spite of Forth's observation that the Nage see their stories of tails as different from the empirical observation of the coccyx in older humans. Where is the boundary between the "empirical" and the "nonempirical" here?

For the rest of his argument, Forth has led us with an expert and nimble hand, carefully dissecting the contexts of Nage ideas. In the end, we may feel that the Nage ideas portrayed are to be seen as a kind of cultural gossip or "rumor." Dan Sperber's concept of representations that are plausible but "can never be given a final interpretation" (Sperber 1996:73, quoted in Forth's own text) seems, in fact, very close to the way rumor operates and to Sperber's own idea of "semipropositional" representations, notions that are not beliefs and are not large claims to truth but are more like potentialities, belonging partly to the world of experience and partly to the world of imagination. Nage tales of tails may be like this. In themselves, they appear to be reports of factual observations, yet they are hedged around with so many protective devices or ritual widgets that they in effect become like more seriously supported dogmas, although remaining outside of the domain of religion as such. Perhaps they can be regarded as a part of the ritualization of attitudes to aging in humans, placing unusual anatomical features along with the generally extraordinary idea of extreme old age. Thereby hangs, then, this complex tale that Forth has provided for us.

Reply

In some manner or degree, all of the commentators touch on one or more of three major issues in the study of human thought: the concept of "belief," whether all humans share common cognitive processes (a "universal, species-based form of cognition," in the words of one pair of commentators), and the relation between cognitivism and anthropology's recent "ontological turn."

After providing an especially perceptive review of my analysis, Charles Salazar suggests that cognitive approaches do not fully explain how things memorable, like ideas about old people growing tails, become objects of belief. I do not disagree. However, I would point out that cognitive anthropologists are hardly alone in failing to account for "belief." More to the point, my use of "belief" in describing the Nage idea is highly qualified. As I state, all I mean by the term is that the well-known idea is "typically articulated in a matter-of-fact way" and that "I make no attempt to determine how far Nage 'really believe'" in it. I would now add that the notion's credibility has probably never been an issue for the Nage, who themselves have rarely if ever analyzed the "belief" or compared it to other propositions that could contradict it. Nor is it an idea on which hang major individual or group interests (like those of a priesthood in Christianity or other religions where unquestioning belief is a crucial source of religious authority)—another factor which, combined with a disinclination to analyze counterintuitive representations as empirical propositions, goes some way to explaining how some such representations become or come to resemble religious beliefs. Scott Simon covers much of the same ground in noting that "the expectation that faith means belief in the literal existence of counterintuitive beings" is a product of historical developments in Christianity. And Simon's mention of "faith" in connection with things counterintuitive usefully recalls Mark Twain's aphorism that "faith is believing what you know ain't so" (1929:114). By contrast, belief or faith is not a concomitant of other counterintuitive ideas, including the oft-cited figure of Mickey Mouse mentioned by Salazar, whose existence as a (living or spiritual) being has, so far as I know, never been a question, let alone an article of faith.

Andrew Lyons declares he is "not convinced" by the claim that ideas like very elderly people growing tails "stand[s] out for the Nage because they are 'counterintuitive,'" but he does not elaborate. Andrew Strathern and Pamela Stewart are more categorically opposed to the contrast of intuitive and counterintuitive, and moreover they apparently reject the idea, which the contrast necessarily entails, that there is a "universal, species-based form of cognition." They make their case by criticizing Boyer's analysis of ghosts, focusing on the proposition that "dead people remain dead and cannot move or become ghosts." This, they suggest, cannot be true everywhere because the Melpa of New Guinea have a word which they translate as "recently died" but which also applies to people who lose consciousness but later regain it. Actually, similar uses of words that can be glossed as "dead" are found in many languages, yet it is questionable whether speakers of these languages fully equate other bodily states with physical extinction. That Melpa, like many other people, understand this last condition as reflecting the irreversible departure of a soul from the body, whereas regaining consciousness signals the soul's return, suggests that they probably do not. In addition, being dead but behaving like living

persons is by no means the only counterintuitive attribute of ghosts. For as a variety of spiritual beings, they typically contradict "folk ontology" (not, by the way, my coinage; see, e.g., Goldman 1992) in a variety of ways—by passing through solid objects, being invisible, and so on—all the while maintaining properties of ordinary humans. These abilities, I suggest, would be found counterintuitive anywhere, as they are completely contrary to expectations of how the world ordinarily works, or of things "empirical" (one term of another contrast the commentators apparently call into question).

Strathern and Stewart's comments are partly a response to my citing their statement (2014) that what cognitivists deem counterintuitive are "naturalized" in their specific cultural settings. Referring to this claim, they say they may just as well have written "culturalized." If I understand correctly, this reiterates the possibly culturally relative character of the intuitive/counterintuitive opposition. I certainly do not deny that the Nage idea is "culturalized." Indeed, if not unique, it is definitely culturally specific. However, this specificity does not mean that, in explaining it, one cannot make use of constant factors of human cognition. In another context, the commentators say that they "do not contest the whole concept of intuition." But surely any acceptance implies the contrasting term. And the contrast is especially implicit when they suggest that the Nage idea about tails—which, of course, I never depict as completely counterintuitive—could instead be understood as an "extension of intuitions about the human body, most understandably in the case of very old people." Actually, this largely replicates my own argument, that the partly counterintuitive proposition derives crucial support from empirically manifest and intuitively factual changes in aging bodies—including loss of erect posture and the like. The difference is that the commentators suggest the idea is not at all counterintuitive, even in spite of my demonstration, which they acknowledge, that Nage regard it as a remarkable proposition relating to an extraordinary development that has invited the imposition of a taboo.

Along the same lines, Strathern and Stewart propose that the Nage representation may be grounded in the thinning of very elderly bodies, resulting in greater prominence of the lower spine—thereby suggesting tails. Given that Nage speculation has these appendages resembling the tails of buffalo, and moreover that they are long enough to be used as brooms, this seems rather unlikely. But even if weight loss were a source of idea—one of my own suggestions—this could not explain why the notion has become elaborated and gained the prominence that it has, nor perhaps why, even in spite of the taboo, no Nage claimed ever to have glimpsed such a "tail" (read "skinny coccyx").

As a final comment, Strathern and Steward suggest the Nage idea could be analyzed in the same way as "gossip or 'rumor.'" Rumors, however, often refer to things that are perfectly plausible as well as relating to singular, one-off events and responding to discernible social factors—none of which applies to the Nage representation. At best, rumors can concern things that are highly unlikely and, in that sense, may strain credibility. But they do not typically contain a counterintuitive component like the Nage idea of elderly people growing an animal-like tail, an idea that Nage themselves find extraordinary.

Scott Simon characterizes the paper as an "innovative rapprochement" between cognitive anthropology and anthropology's ontological turn—an approach that has non-Western societies maintaining a radically different way of experiencing the world, largely identified with a revamped concept of animism. This may be so, inasmuch as the two approaches bear on the same questions, but for the most part Simon's remarks only underline the differences. Contrary to Simon, Descola's brief reference to cognitive universals is made only to dismiss them as relevant to an understanding of particular cultural ideas, and as Simon correctly observes, ontological theories "cannot explain why the Nage say humans grow tails." On the other hand, whereas Kohn seemingly recognizes a panhuman cognition only to extend it to nonhuman animals, the Nage representation, on the contrary, attributes a physical feature characteristic of animals to humans, more exactly a very small portion of humans. Notwithstanding Descola's tendentious suggestion that specific "ontologies" are merely dominant in a given society, however, a greater difference lies in the cognitivist recognition of the occurrence in all societies, including the Nage, of fundamentally counterintuitive ideas that some have identified as "animist," as opposed to an interpretation of such ideas as distinctive to and definitive of an entire "ontology." (Incidentally, the occurrence of "animist" ideas among Nage should answer Lyon's query about "traces of animism" and his charge that, like the ontologists, I engage in "ideal-typical thinking.")

In this connection, Simon's final introduction of the Japanese concept of *tsukumogami* is interesting, partly because it also bears on Salazar's comments on "belief." Japanese might be taken as believing that tools or other nonliving things have souls. However, according to Simon, Japanese authors and artists "take delight in playing with ideas about [such things as ensouled artifacts] apparently without needing to prove their existence anywhere"—an interpretation not only reminiscent of Disney's bipedal talking mouse but also fully consistent with the evidently counterintuitive aspect of such propositions. Along similar lines, rather than regularly talking about elderly people's tails because they firmly believe in their existence, Nage more likely continue to rehearse the idea because they find it entertaining or amusing, and any conviction suggested by this persistence may only be apparent.

Two more specific points deserve attention. Lyons declares a "nagging suspicion" that no elderly Nage has ever been identified by contemporaries as having grown a tail, adding that no details are given of the 10 cases that I mention. In fact, I can provide names, relationships, and other details for all 10, and as I remark, informants described individuals they remembered from childhood who were reputed to possess such appendages. As Lyons links his suspicion to the unlikelihood of so many centenarians occurring in a small population, I should probably have made clearer that Nage statements about individuals reaching an extremely old age generally appeared greatly exaggerated, a tendency facilitated by the fact that, until recently,

dates of birth have never been recorded. However, I am not sure how this affects my interpretation of the Nage idea, or does so any more than the fact that no one claims to have seen an elderly person's tail.

Finally, Salazar detects an inconsistency between, on the one hand, my "functionalist" suggestion that Nage attribution of tails (and thus implicit animality) to elderly people may have the psychological effect of distancing younger people from disturbing features of senility and, on the other, Nage admiration of extreme longevity. In fact, there is no inconsistency here. As I state, tail growth itself is not admired, any more than is curvature of the spine or hearing loss, but only the attainment of very old age. In addition, the suggestion is presented as a supplement to my main argument, which stands on its own.

—Gregory Forth

References Cited

Atran, Scott. 1990. *Cognitive foundations of natural history: towards an anthropology of science*. Cambridge: Cambridge University Press.

Atran, Scott, and Douglas Medin. 2008. *The native mind and the cultural construction of nature*. Cambridge, MA: MIT Press.

Barrett, J. L. 2000. Exploring the natural foundations of religion. *Trends in Cognitive Sciences* 4:29–34.

Bloch, Maurice. 2012. *Anthropology and the cognitive challenge*. Cambridge: Cambridge University Press.

Boyer, Pascal. 1994. *The naturalness of religious ideas: a cognitive theory of religion*. Berkeley: University of California Press.

———. 1996. What makes anthropomorphism natural: intuitive ontology and cultural representations. *Journal of the Royal Anthropological Institute* 2(1):83–97.

———. 2001. *Religion explained: the evolutionary origins of religious thought*. New York: Basic.

Crocker, J. C. 1977. My brother the parrot. In *The social use of metaphor*. J. D. Sapir and J. C. Crocker, eds. Pp. 164–192. Philadelphia: University of Pennsylvania Press.

D'Andrade, Roy. 1995. *The development of cognitive anthropology*. Cambridge: Cambridge University Press. [SS]

Descola, Philippe. 2013 [2005]. *Beyond nature and culture*. Janet Lloyd, trans. Chicago: University of Chicago Press.

Douglas, Mary. 1966. *Purity and danger: an analysis of concepts of pollution and taboo*. London: Routledge.

Evans-Pritchard, E. E. 1937. *Witchcraft, oracles and magic among the Azande*. London: Oxford University Press. [AL]

———. 1956. *Nuer religion*. Oxford: Clarendon.

Eskes, T., and C. Haanen. 2007. Why do women live longer than men? *European Journal of Obstetrics and Gynecology and Reproductive Biology* 113(2):126–133.

Forth, Gregory. 1981. *Rindi: an ethnographic study of a traditional domain in eastern Sumba*. The Hague: Nijhoff.

———. 1998. *Beneath the volcano: religion, cosmology and spirit classification among the Nage of eastern Indonesia*. Leiden: Royal Institute (KITLV) Press.

———. 2007. Can animals break taboos?: applications of "taboo" among the Nage of eastern Indonesia. *Oceania* 77(2):215–231.

———. 2009. Human beings and other people: classification of human groups and categories among the Nage of Flores (eastern Indonesia). *Bijdragen tot de Taal-, Land- en Volkenkunde* 165(4):493–514.

———. 2016. *Why the porcupine is not a bird: explorations in the folk zoology of an eastern Indonesian people*. Toronto: University of Toronto Press.

Goldman, A. I. 1992. *Liaisons: philosophy meets the cognitive and social sciences*. Cambridge, MA: MIT Press.

Hazan, Haim. 2009. Essential others: anthropology and the return of the old savage. *International Journal of Sociology and Social Policy* 29(1/2):60–72.

Kohn, Edward. 2015. Anthropology of ontologies. *Annual Review of Anthropology* 44(1):311–327.

Lewens, Tim. 2015. *Cultural evolution*. Oxford: Oxford University Press.

Reider, Noriko T. 2009. Animating objects: Tsukumogami ki and the medieval illustration of Shingon truth. *Japanese Journal of Religious Studies* 36(2):231–257. [SS]

Sperber, Dan. 1975. *Rethinking symbolism*. Alice L. Morton, trans. Cambridge: Cambridge University Press.

———. 1982. Apparently irrational beliefs. In *Rationality and relativism*. S. Lukes and M. Hollis, eds. Pp. 149–180. Oxford: Blackwell. [AS/PJM]

———. 1996. *Explaining culture: a naturalistic approach*. Oxford: Blackwell.

Steinen, Karl von den. 1894. *Unter den Naturvölken Zentral-Brasiliens*. Berlin: Reimer.

Stewart, Pamela J., and Andrew Strathern. 2014. *Ritual: key concepts in religion*. London: Bloomsbury.

———. 2017. *Breaking the frames: anthropological conundrums*. New York: Palgrave-Macmillan. [AS/PJM]

Tremlin, Todd. 2006. *Minds and gods: the cognitive foundations of religion*. New York: Oxford University Press.

Turner, Terrance. 1991. "We are parrots," "Twins are birds": play of tropes as operational structure. In *Beyond metaphor: the theory of tropes in anthropology*. J. W. Fernandez, ed. Pp. 121–158. Stanford, CA: Stanford University Press.

———. 2009. The crisis of late structuralism. Perspectivism and animism: rethinking, culture, nature, spirit, and bodiliness. *Tipití: Journal of the Society for the Anthropology of Lowland South America* 7(1):3–42. http://digitalcommons.trinity.edu/tipiti/vol7/iss1/1 (accessed November 5, 2017). [AL]

Twain, Mark. 1929. *Following the equator*. Vol. 1. New York: Harper.

Viveiros de Castro, E. 2014 [2009]. *Cannibal metaphysics: for a post-structural anthropology*. Minneapolis, MN: Univocal.

Wolpert, Lewis. 1992. *The unnatural nature of science*. London: Faber & Faber.